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### Ohio State Engineer

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# New Campus Personalities

By Perry Borchers, Ben Easterling, Don Arnold, and Jack Shulman



Col. Dorst

**L**T. COL. JAMES ARCHER DORST, new commander of the Engineer R. O. T. C. unit at Ohio State, comes to this university with all the varied experience which is the lot of an officer in the Corps of Engineers, U. S. Army. The lecture room and the teaching of military science and tactics are no new events to the colonel, who served as an assistant professor at the United States Military Academy for the four years from 1918 to 1922. Previous to that time and during the interim from 1922 till now, Col. Dorst has served as army officer and army engineer in the continental United States and in the possessions of Hawaii and the Philippines.

Col. Dorst, a trim, keen eyed officer of 47, won his "A" in fencing at West Point and was recently runner up for the California State Veterans tennis championship. Joseph Dorst, now enrolled as a sophomore at Ohio State says that his father is a much better tennis player than a fencer. And it is true that mighty tennis players come out of California.

James Archer Dorst was born in San Francisco, California, January 29, 1892. He attended school in Wayne, Pa., and was graduated from the U. S. Military Academy at West Point in 1913. After graduation, Second Lieutenant Dorst had the usual year of troop duty followed by a year and a half at the spe-

cial engineer school, Washington D. C. He then served in Texas and the Philippines, and was in the Philippines at the time of the U. S. entry into the World War. He got as far east as New York where he was sent to West Point as assistant professor during the last six months of the war. In the summer of 1919 he went to France and traveled 3000 miles along the battlefronts.

When he had finished his term as assistant professor at West Point in July, 1922, and after two years with the 13th Engineer's at Ft. Belvoir, Col. Dorst went on river and harbor duty in the Sacramento district, California, September 1924. He also spent several years in Hawaii as battalion and regimental commander; then attended the Army Industrial College in Washington D. C., and so to duty in the National Guard Bureau, and just before coming to Ohio State, Col. Dorst served four years as District Engineer, U. S. Engineer's Office, San Francisco.

This was river and harbor duty. A little known fact which Col. Dorst told is that the army Corps of Engineers built Treasure Island, site of the Golden Gate International Exposition. There were a number of interesting engineering problems to be solved in this construction which was begun by the Corps of Engineers February 7, 1936.

It was planned to do most of the work by contract, but contractors wouldn't bid, feeling that the project was too difficult and held no prospect of money making. So the army engineers undertook the work, chiefly dredging, with their own equipment.

An engineer dredge going to Seattle was allowed to be held over for two months and other available army dredges were put to work. Eventually several commercial dredges were rented as a supplementary measure.

In the dredging the army used a different system from the common commercial practice there. Common practice was to use pipe line dredges, scoop up the bottom of the bay and pipe the sand, gravel, and clay to the desired dumping place.

The army dredges could pump only about 3000 feet in contrast to much greater pumping distance by the more powerful commercial dredges. The engineers therefore used sea going hopper dredges which had bins in their holds into which sand and gravel could be pumped to be emptied over the site of the island. When the water over the fill became too shallow for these hopper dredges, great holes were made by the pipe line dredges in the floor of the bay into which the hopper dredges unloaded their bins of sand and gravel to be pumped by the pipe line dredges onto the fill. A better mixture of sand and gravel, with less clay, obtained by the hopper dredges at a distance from the island, allowed the fill to settle firmly at a more rapid rate than usual.

In spite of problems of surge, waves and tidal currents, the army engineers under Col. Dorst finished the job on time and within the required amount of money (the same that had been refused by the contractors) and made a good solid fill. The army engineers also put in rip rap walls for wave protection with elevation from -6 ft. to +14 ft. The finished elevation was 13.5 ft. above mean low water level, 4.5 ft. above high tide, and 2 ft. above the crest of a 5 ft. wave at high tide.

The island when finished was approximately 400 acres in size with about 3 miles of rock wall around it. The causeway from Yerba Buena Island to the exposition island was also built by the army engineers. Dipper dredges were used to dig out a trench on the bay floor to provide a better foundation to take the fill.

On the island of Yerba Buena, which rises about 300 feet out of the bay, a 3,000,000 gallon reservoir with a daily capacity of 2,000,000 gallon was set at an elevation of about 240 feet. A pumping station at the San Francisco end of the San Francisco Oakland Bay bridge pumped water to Yerba Buena through a 10 inch high pressure line across the bridge itself. The engineering problems may be appreciated when one considers that the larger suspension bridge spans across which the water main traveled have a theoretical maximum variation of approximately 20 feet in elevation, 10 feet in lateral displacement, and  $2\frac{1}{2}$  feet in length.

Treasure Island was not of the ordinary type of work for the Corps of Engineers in San Francisco. Their work consisted of general maintenance and improvement of rivers and harbors, the development of new harbors, investigations upon request of committees of Congress, and recently, flood control developments.

While in San Francisco, Col. Dorst had charge of the construction of two big sea coast batteries of major calibre, the most modern fortifications of that kind so far constructed.

Col. Dorst gives the following explanation as to why the Corps of Engineers of the U. S. Army does so much civil work. The Military Academy at West Point was started as a school for engineer officers. For well over a score of years it was wholly an engineering school and it had an engineer officer as superintendent up till 1866. Until the 1830's West Point was the only technical school in the country.

The Army Corps of Engineers made the first geodetic maps of our country, they built lighthouses to warn of shoals, later removed the shoals by dredging; they developed all of our great harbors, until 1915 the Corps built many of the federal public buildings in Washington D. C. (They are now constructing an air port on dredged land there); they had spent about \$350,000,000 on flood control on the Mississippi by 1930; they constructed the dams and locks on the Ohio River that make navigation possible. They also built jetties at the mouth of the Columbia River, dams on the Big Kanawha, Wilson Dam as Mussel Shoals, and are becoming very active in flood control. The Corps of Engineers, U. S. Army, spends about \$250,000,000 annually.

As Col. Dorst puts it, "The civil work is a heritage of which we are proud. The Corps of Engineers does its work with very little politics, no fuss, and commendable efficiency."

Col. Dorst has now, for the time being at least, left his civil engineering work for the class room. Of his three sons one remains as senior at the University of California at Berkeley, another, Joseph Dorst, is enrolled at Ohio State, and his third son attends Bexley High. Col. Dorst's hobbies are reading and mechanical puttering, and the army has taken out patents on some improvements he conceived for vehicles.

Col. Dorst states that he is impressed by the friendly attitude he has met at Ohio State. Judging from meeting Col. Dorst, this friendliness is a reflection of his own attitude.

## PROFESSOR E. J. LINDAHL

**M**R. E. J. LINDAHL, instructor in mechanical engineering and former faculty member of the University of Maryland, is among the additions this quarter to the Ohio State University faculty. He is well qualified, not only by scholastic training, but also by different kinds of work in engineering practice.

Although he comes from another state, this is not his first residence in Ohio as he was born in Cleveland, Ohio. However, at an early age he moved to Nebraska where he received his elementary and high school education.

At the completion of his high school work, he

Prof. Lindahl







Mr. Evans

turned westward to the University of Wyoming in the quest for higher education. He was awarded a Bachelor of Science degree in 1932, and continued in graduate work finishing in 1933 with a degree of Master of Science.

After graduation from Wyoming, between the years of 1933 to 1936, he was engaged in actual engineering work. In this period he shifted several times, working first in Laramie, Wyoming for the United States Geological Survey. Following that he worked for the state engineer's office at Cheyenne, Wyoming. At Fort Beck, his next scene of operations, he was employed operating centrifugal pumps on a dredge.

In 1936 an opportunity in the teaching profession offered itself in the offer for him to act as substitute instructor in the Catholic University, Washington, D. C. Following completion of this term, he remained in Washington and was engaged in research work for the Soil Conservation Commission. In the Fall of 1936 he joined the faculty of the University of Maryland where he spent the two years immediately preceding his appointment to Ohio State.

His first reactions to Ohio State are highly favorable. He is very well pleased with the situation here and says that the relations with his associates in the Department of Mechanical Engineering are the most cordial he has experienced.

Although engineering is, and has been, the center of his interests, he is keenly interested in other activities. All sports find him an interested spectator with baseball rating tops. This is an outgrowth of active participation in sandlot baseball in his youth. He is anticipating the opening of the baseball season next

spring when he may get his first view of the Redbirds in action under lights.

## ASSISTANT PROFESSOR S. O. EVANS

ONE of the latest additions to the faculty of the College of Engineering here at Ohio State is Assistant Professor Sidney O. Evans of the Department of Electrical Engineering. At present he is teaching Electrical Engineering 604.

Professor Evans, having been associated with the University of Wisconsin, Iowa State University, and Ohio State University, is definitely a product of our "Big Ten". The first years of his college career were spent at the University of Wisconsin where he became enrolled in the American Institute of Electrical Engineers and Tau Beta Pi, the national engineering honorary. He graduated from Wisconsin in 1932 with a Bachelor of Science degree. As he said, "You know what a poor time that was to graduate from college".

Despite the economic condition of the country at that time, education and engineering had to carry on. Mr. Evans received a graduate assistantship at Iowa State University, his second "Big Ten" contact. His work in this capacity required about one-half of his time; the other half he spent working for his "Masters". This combination kept him very well occupied until August 15, 1939 when he was enrolled in the Advanced Electrical Engineering courses conducted by the General Electric Company. He received his Master of Science degree from Iowa State University shortly afterwards.

At first glance, one of these courses would seem to be what is often termed a "snap course", for the assignment averaged only one problem per week. The catch, for, as we have already learned, there is one in almost all such situations in engineering, is that each problem requires about twenty-five hours to solve.

After completing three years work in this course of study, Mr. Evans was elevated to the position of supervisor of a section of one of these courses. This differed considerably from the procedure here at Ohio State in that there the supervisor secures outside lecturers while here he must prepare and deliver his own lectures. Having concluded two years employment in this capacity, he was transferred to the Pittsfield plant.

It was there that Professor Evans obtained much of his practical experience outside of teaching. His work was largely in connection with the development of power transformers and distribution transformers. While at Pittsfield he became Assistant Scoutmaster of one of the oldest Boy Scout troops in the United States. It was organized in 1910 and claims to be Pittsfield Troop number one, the first in that section of the country. Much of his leisure time here was spent in sailing.

At the beginning of this Autumn Quarter he was placed on the faculty of Ohio State University. Although he spent much of his boyhood in Milwaukee, Wisc., he was hasty to maintain that the home of Professor and Mrs. S. O. Evans is right here in Columbus, specifically at 1789 King Avenue.

When queried concerning his athletic interests, he stated "I enjoy them all". He likes tennis, "plays a lousy game of golf", (Golfers beware), and likes to swim best of all. He is one of the many admirers of our Natatorium, having already taken advantage of its existence and intending to continue doing so.

He is with the majority of Ohio State gridiron fans, when he states "The boys certainly look hot!".

In addition to his already active membership in the American Institute of Electrical Engineers and Tau Beta Pi, he intends to join the Faculty Club.

In conclusion, Professor Evans made the statement "I have found the faculty of Ohio State extremely cordial and the student body very cooperative".

To you, Professor Evans, we, of the College of Engineering, extend the heartiest of welcomes and sincerely hope that the additional voltage you furnish on the Electrical Engineering staff will strengthen the beam guiding both you and your students on to higher and better engineering achievements.

### MR. W. L. DAVIS

Mr. Davis did his undergraduate work at Johns Hopkins University of Baltimore, Maryland. He was enrolled in the mechanical engineering course and in 1937 he received the degree of Bachelor of Engineering in Mechanical Engineering.

After graduation from college he worked with the General Electric Company. With that company he was enrolled in the two year student test course. The capacity of his job with that firm was the testing of all the different kinds of products which the company makes. During his enrollment in the test course

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Mr. Davis

he worked in the General Electric plants in Schenectady, N. Y.; Lynn, Mass.; and Pittsfield, Mass.

After the two year course in industry was completed, he began work this September for the Department of Electrical Engineering at this university. At the present time he is teaching the electrical engineering courses which are given to non-electrical engineering students.

### MR. WALTER K. HALSTEAD

Walter K. Halstead, new graduate assistant in the Department of Electrical Engineering, is a native of Germany. Born in Frankfurt-on-Main in 1916, he lived in Germany until 1935, eye-witnessing the downfall of the republic and the early stages of the rise of the dictatorship.

Desiring to study engineering, and wishing to evade conditions in the Fatherland, which in 1935 were already "getting too hot", Mr. Halstead went to Zurich, Switzerland, and enrolled in the Swiss Federal Institute of Technology.

In 1936 he moved with his family to the United States, and a complete transfer of credit was effected to Massachusetts Institute of Technology at Cambridge, where he entered in February, 1937, as a mid-year sophomore. June, 1939, saw him graduate from M. I. T. with a B. S. degree in Electrical Engineering.

Besides mastering engineering subjects, Mr. Halstead has at his command the English, German, and French languages, all of which he speaks fluently. Skiing is his hobby, although he maintains that steep, snow-covered slopes were not his prime reason for selecting the Alps school.





Mr. Pieracci

Were he not the mild and reserved individual that he is, his reaction on the present situation in Europe would hardly be fit for print. Our U. S. A. seems a grand place to him, and he has already taken out

first citizenship papers. He does not care to comment on Germany's future, except to mention that he has no desire to return. This, we feel, is our gain and Germany's loss.

### MR. R. J. PIERACCI

Roger J. Pieracci comes to Ohio State from a state which claims to grow corn taller than ours. His official status is graduate assistant in the Department of Electrical Engineering, where he is continuing the studies in communication which were temporarily terminated upon his graduation from Iowa State College at Ames in 1932.

For five years up until last May, Mr. Pieracci was employed at the Collins Radio Company in Cedar Rapids, Iowa, where his work was the design and development of radio transmitting equipment. A leave of absence granted by the company in May provided the welcome opportunity to take graduate work in pursuit of the Masters Degree.

This summer he took a genuine vacation in the form of a trip to Europe, purely for recreation and education. He didn't get back any too soon, out-timing the European declaration of war only by about a week. He believes that America should absolutely stay out of war; that the European political situation is not our business.

Asked why he chose O. S. U. for his graduate work, he responded that Ohio State has one of the best communications schools in the country, a statement which we will not dispute. His main reaction on the co-ed situation on the campus, is that there is a conspicuous dearth of them on the quadrangle, another indisputable fact.